

Welcome, Educators!

As you plan for this year, we hope that *Math in Focus*[®] and the Singapore Math[®] approach will provide effective strategies for focusing and differentiating instruction. The framework below is designed to help you focus your planning.

Using the Essential Content Framework

To move forward this fall, we recommend beginning with the content from the current grade. Review this framework against your school's and state's specific goals, and in collaboration with administrators and your colleagues across grades, to determine where you want to add new content or prior-year review.

As you reach the priority topics shown below, as well as the topics that address your specific priorities, you may want to reinforce prerequisite knowledge. The third column (Grades 1 and up) suggests where you can find support from the prior grade on *Ed*. If the third column is empty, it means that students learned the prerequisites earlier this grade, or several grades in the past.

When you reach content that is *not* listed as priority content, you can take several paths to give students a targeted grounding:

- Combine some content from that section into a related priority section.
- Teach a mini-lesson on that topic, with the Learn activities and small-group practice, possibly using learning stations.
- Use these topics to extend concepts within a related section.

Evaluating Readiness

The HMH Math Growth Measure is designed to be given three times a year and can provide a profile of students' mathematical proficiencies. In addition, you have access to Quick Checks and prior-year digital and printable assessments on *Ed*. We recommend treating these as diagnostic and formative to provide the most supportive learning environment.

From Engagement to Mastery

Students should start with engaging, hands-on learning experiences. Using the Concrete-Pictorial-Abstract (CPA) approach, you may want students to use physical math manipulatives throughout the lessons and as a strategic resource to solve non-routine problems. The Learn Videos (Grades 1–5) and Virtual Manipulatives can also provide some extra support. The goal is for students to grow as problem solvers and as mathematicians.

We look forward to supporting you on this worthwhile journey.

The *Math in Focus*[®] Team

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Priority standards were identified through Achieve the Core.*

Standards in *italics* were further selected by International Center for Leadership in Education.**

Course 1 Section	Priority Standards	Prior Learning
Chapter 1 Whole Numbers, Prime Numbers, and Prime Factorization		
1.1 Prime Factorization	Not identified as a Priority Standard. See teaching suggestions above.	
1.2 Common Factors	Not identified as a Priority Standard. See teaching suggestions above.	
1.3 Squares and Cubes	6.EE.A Apply and extend previous understandings of arithmetic to algebraic expressions.*	Grade 5 Section 1.2
Chapter 2 Number Lines and Negative Numbers		
2.1 The Number Line	6.NS.C Apply and extend previous understandings of numbers to the system of rational numbers.	
2.2 <i>Negative Numbers</i>	<i>6.NS.C Apply and extend previous understandings of numbers to the system of rational numbers.**</i>	
2.3 Absolute Value	6.NS.C Apply and extend previous understandings of numbers to the system of rational numbers.	
Chapter 3 Fractions and Decimals		
3.1 <i>Dividing Fractions</i>	<i>6.NS.A Apply and extend previous understandings of multiplication and division to divide fractions by fractions.</i>	Grade 5 Section 3.7
3.2 <i>Real-World Problems: Fractions</i>	<i>6.NS.A Apply and extend previous understandings of multiplication and division to divide fractions by fractions.</i>	Grade 5 Section 3.8
3.3 <i>Adding and Subtracting Decimals Fluently</i>	<i>6.NS.B Compute fluently with multi-digit numbers and find common factors and multiples.+</i>	Grade 5 Section 5.1 Grade 5 Section 5.2
3.4 <i>Multiplying Decimals Fluently</i>	<i>6.NS.B Compute fluently with multi-digit numbers and find common factors and multiples.+</i>	Grade 5 Section 5.3 Grade 5 Section 5.4
3.5 <i>Dividing Decimals Fluently</i>	<i>6.NS.A Apply and extend previous understandings of multiplication and division to divide fractions by fractions.</i> <i>6.NS.B Compute fluently with multi-digit numbers and find common factors and multiples.+</i>	Grade 5 Section 5.5 Grade 5 Section 5.6
3.6 <i>Real-World Problems: Decimals</i>	<i>6.NS.B Compute fluently with multi-digit numbers and find common factors and multiples.+</i>	Grade 5 Section 5.9
Chapter 4 Ratio		
4.1 Comparing Two Quantities	6.RP.A Understand ratio concepts and use ratio reasoning to solve problems.	Grade 5 Section 9.1
4.2 Equivalent Ratios	6.RP.A Understand ratio concepts and use ratio reasoning to solve problems.	Grade 5 Section 9.2
4.3 Real-World Problems: Ratios	6.RP.A Understand ratio concepts and use ratio reasoning to solve problems.	Grade 5 Section 9.4
Chapter 5 Rates and Speed		

Course 1 Section	Priority Standards	Prior Learning
5.1 Rates and Unit Rates	6.RP.A Understand ratio concepts and use ratio reasoning to solve problems.	Grade 5 Section 9.4
5.2 Real-World Problems: Rates and Unit Rates	6.RP.A Understand ratio concepts and use ratio reasoning to solve problems.	Grade 5 Section 9.4
5.3 Distance and Speed	6.RP.A Understand ratio concepts and use ratio reasoning to solve problems.	
5.4 Average Speed	6.RP.A Understand ratio concepts and use ratio reasoning to solve problems.	
Chapter 6 Percent		
6.1 Understanding Percent	6.RP.A Understand ratio concepts and use ratio reasoning to solve problems.	Grade 5 Section 10.1
6.2 Fractions, Decimals, and Percents	6.RP.A Understand ratio concepts and use ratio reasoning to solve problems.	Grade 5 Section 10.2
6.3 Percent of a Quantity	6.RP.A Understand ratio concepts and use ratio reasoning to solve problems.	Grade 5 Section 10.3
6.4 Real-World Problems: Percent	6.RP.A Understand ratio concepts and use ratio reasoning to solve problems.	Grade 5 Section 10.4
Chapter 7 Algebraic Expressions		
7.1 Using Letters to Represent Numbers	6.EE.A Apply and extend previous understandings of arithmetic to algebraic expressions.	
7.2 Evaluating Algebraic Expressions	6.EE.A Apply and extend previous understandings of arithmetic to algebraic expressions.	
7.3 Simplifying Algebraic Expressions	6.EE.A Apply and extend previous understandings of arithmetic to algebraic expressions.	
7.4 Expanding and Factoring Algebraic Expressions	6.EE.A Apply and extend previous understandings of arithmetic to algebraic expressions.	
7.5 Real-World Problems: Algebraic Expressions	6.EE.B Reason about and solve one-variable equations and inequalities.	
Chapter 8 Equations and Inequalities		
8.1 Solving Algebraic Equations	6.EE.B Reason about and solve one-variable equations and inequalities.	
8.2 Writing Linear Equations	6.EE.B Reason about and solve one-variable equations and inequalities. 6.EE.C Represent and analyze quantitative relationships between dependent and independent variables. 6.RP.A Understand ratio concepts and use ratio reasoning to solve problems.	
8.3 Real-World Problems: Equations	6.EE.B Reason about and solve one-variable equations and inequalities.	
8.4 Solutions of Simple Inequalities	6.EE.B Reason about and solve one-variable equations and inequalities.	
8.5 Real-World Problems: Inequalities	6.EE.B Reason about and solve one-variable equations and inequalities.	

Course 1 Section	Priority Standards	Prior Learning
Chapter 9 The Coordinate Plane		
9.1 Points on a Coordinate Plane	6.NS.C Apply and extend previous understandings of numbers to the system of rational numbers.	Grade 5 Section 7.2 Grade 5 Section 7.3
9.2 Lengths of Line Segments	Not identified as a Priority Standard. See teaching suggestions above.	
9.3 Real-World Problems: Graphing	6.EE.A Apply and extend previous understandings of arithmetic to algebraic expressions. 6.EE.C Represent and analyze quantitative relationships between dependent and independent variables. 6.NS.C Apply and extend previous understandings of numbers to the system of rational numbers.	Grade 5 Section 7.2 Grade 5 Section 7.3
Chapter 10 Area of Polygons		
10.1 Area of Triangles	6.G.A Solve real-world and mathematical problems involving area, surface area, and volume.+ 6.EE.A Apply and extend previous understandings of arithmetic to algebraic expressions.	Grade 5 Section 8.1
10.2 Area of Parallelograms and Trapezoids	6.G.A Solve real-world and mathematical problems involving area, surface area, and volume.+ 6.EE.A Apply and extend previous understandings of arithmetic to algebraic expressions.	Grade 5 Section 8.2
10.3 Area of Other Polygons	6.G.A Solve real-world and mathematical problems involving area, surface area, and volume.+ 6.EE.A Apply and extend previous understandings of arithmetic to algebraic expressions.	Grade 5 Section 8.2
Chapter 11 Surface Area and Volume of Solids		
11.1 Prisms and Pyramids	6.G.A Solve real-world and mathematical problems involving area, surface area, and volume.+	
11.2 Surface Area of Solids	6.G.A Solve real-world and mathematical problems involving area, surface area, and volume.+ 6.EE.A Apply and extend previous understandings of arithmetic to algebraic expressions.	
11.3 Volume of Rectangular Prisms	6.G.A Solve real-world and mathematical problems involving area, surface area, and volume.+ 6.EE.A Apply and extend previous understandings of arithmetic to algebraic expressions.	Grade 5 Section 6.1 Grade 5 Section 6.2 Grade 5 Section 6.3
11.4 Real-World Problems: Surface Area and Volume	6.G.A Solve real-world and mathematical problems involving area, surface area, and volume.+	Grade 5 Section 6.3 Grade 5 Section 6.4

Course 1 Section	Priority Standards	Prior Learning
	<i>6.EE.A Apply and extend previous understandings of arithmetic to algebraic expressions.</i>	
Chapter 12 Introduction to Statistics		
12.1 Collecting and Tabulating Data	Not identified as a Priority Standard. See teaching suggestions above.	
12.2 Dot Plots	Not identified as a Priority Standard. See teaching suggestions above.	
12.3 Histograms	Not identified as a Priority Standard. See teaching suggestions above.	
Chapter 13 Measures of Central Tendency and Variability		
13.1 Mean	Not identified as a Priority Standard. See teaching suggestions above.	
13.2 Median	Not identified as a Priority Standard. See teaching suggestions above.	
13.3 Mode	Not identified as a Priority Standard. See teaching suggestions above.	
13.4 Interpreting Quartiles and Interquartile Range	Not identified as a Priority Standard. See teaching suggestions above.	
13.5 Box Plots and Mean Absolute Deviation	Not identified as a Priority Standard. See teaching suggestions above.	
13.6 Real-World Problems: Measures of Central Tendency and Variability	Not identified as a Priority Standard. See teaching suggestions above.	

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Course 2 Section	Priority Standards	Prior Learning
Chapter 1 Rational Numbers		
1.1 Representing Rational Numbers on a Number Line	7.NS.A Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.*	Grade 6 Section 2.1
1.2 Writing Rational Numbers as Decimals	7.NS.A Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	Grade 6 Section 6.2
1.3 Adding Integers	7.NS.A Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	Grade 6 Section 2.2 Grade 6 Section 2.3
1.4 Subtracting Integers	7.NS.A Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	Grade 6 Section 2.2 Grade 6 Section 2.3
1.5 Multiplying and Dividing Integers	7.NS.A Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	
<i>1.6 Order of Operations with Integers</i>	<i>7.NS.A Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.**</i> 7.EE.B Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	
<i>1.7 Operations with Fractions and Mixed Numbers</i>	<i>7.NS.A Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.</i> 7.EE.B Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	<i>Grade 6 Section 3.1</i> <i>Grade 6 Section 3.2</i>
1.8 Operations with Decimals	7.NS.A Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers. 7.EE.B Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	Grade 6 Section 3.3 Grade 6 Section 3.4 Grade 6 Section 3.5 Grade 6 Section 3.6
Chapter 2 Algebraic Expressions		
2.1 Adding Algebraic Terms	7.EE.A Use properties of operations to generate equivalent expressions.	Grade 6 Section 7.1 Grade 6 Section 7.2
2.2 Subtracting Algebraic Terms	7.EE.A Use properties of operations to generate equivalent expressions.	Grade 6 Section 7.1 Grade 6 Section 7.2

Course 2 Section	Priority Standards	Prior Learning
2.3 Simplifying Algebraic Expressions	7.EE.A Use properties of operations to generate equivalent expressions.	Grade 6 Section 7.3
2.4 Expanding Algebraic Expressions	7.EE.A Use properties of operations to generate equivalent expressions.	Grade 6 Section 7.4
2.5 Factoring Algebraic Expressions	7.EE.A Use properties of operations to generate equivalent expressions.	Grade 6 Section 7.4
2.6 Writing Algebraic Expressions	7.EE.A Use properties of operations to generate equivalent expressions.	Grade 6 Section 7.1 Grade 6 Section 7.2 Grade 6 Section 7.3 Grade 6 Section 7.4
2.7 Real-World Problems: Algebraic Reasoning	7.EE.B Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	Grade 6 Section 7.5
Chapter 3 Algebraic Equations and Inequalities		
3.1 Identifying Equivalent Equations	7.EE.A Use properties of operations to generate equivalent expressions	Grade 6 Section 8.1 Grade 6 Section 8.2 Grade 6 Section 8.3
3.2 Solving Algebraic Equations	7.EE.B Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	Grade 6 Section 8.1
3.3 Real-World Problems: Algebraic Equations	7.EE.B Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	Grade 6 Section 8.3
3.4 Solving Algebraic Inequalities	7.EE.B Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	Grade 6 Section 8.4
3.5 Real-World Problems: Algebraic Inequalities	7.EE.B Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	Grade 6 Section 8.4 Grade 6 Section 8.5
Chapter 4 Proportion and Percent of Change		
4.1 Identifying Direct Proportion	7.RP.A Analyze proportional relationships and use them to solve real-world and mathematical problems.	Grade 6 Section 4.1 Grade 6 Section 4.2
4.2 Representing Direct Proportion Graphically	7.RP.A Analyze proportional relationships and use them to solve real-world and mathematical problems.	Grade 6 Section 4.2 Grade 6 Section 9.1
4.3 Real-World Problems: Direct Proportion	7.RP.A Analyze proportional relationships and use them to solve real-world and mathematical problems.	Grade 6 Section 4.3
4.4 Identifying Inverse Proportion	7.RP.A Analyze proportional relationships and use them to solve real-world and mathematical problems.	Grade 6 Section 4.1 Grade 6 Section 4.2
4.5 Percent Increase and Decrease	7.RP.A Analyze proportional relationships and use them to solve real-world and mathematical problems.	Grade 6 Section 6.1 Grade 6 Section 6.2 Grade 6 Section 6.3

Course 2 Section	Priority Standards	Prior Learning
4.6 Real-World Problems: Percent Increase and Decrease	7.RP.A Analyze proportional relationships and use them to solve real-world and mathematical problems.	Grade 6 Section 6.1 Grade 6 Section 6.2 Grade 6 Section 6.3 Grade 6 Section 6.4
Chapter 5 Angle Properties and Straight Lines		
5.1 Complementary, Supplementary, and Adjacent Angles	Not identified as a Priority Standard. See teaching suggestions above.	
5.2 Angles That Share a Vertex	Not identified as a Priority Standard. See teaching suggestions above.	
5.3 Alternate Interior, Alternate Exterior, and Corresponding Angles	Not identified as a Priority Standard. See teaching suggestions above.	
5.4 Interior and Exterior Angles	Not identified as a Priority Standard. See teaching suggestions above.	
Chapter 6 Geometric Construction		
6.1 Constructing Triangles	Not identified as a Priority Standard. See teaching suggestions above.	
6.2 Scale Drawings and Lengths	7.G.A Draw, construct and describe geometrical figures and describe the relationships between them.+	Grade 6 Section 4.2 Grade 6 Section 5.2
6.3 Scale Drawing and Areas	7.G.A Draw, construct and describe geometrical figures and describe the relationships between them.+	Grade 6 Section 4.3 Grade 6 Section 5.2
Chapter 7 Circumference, Area, Volume, and Surface Area		
7.1 Radius, Diameter, and Circumference of a Circle	Not identified as a Priority Standard. See teaching suggestions above.	
7.2 Area of a Circle	Not identified as a Priority Standard. See teaching suggestions above.	
7.3 Real-World Problems: Circles	Not identified as a Priority Standard. See teaching suggestions above.	
7.4 Area of Composite Figures	7.G.B Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.+	Grade 6 Section 10.1 Grade 6 Section 10.2 Grade 6 Section 10.3
7.5 Volume of Prisms	7.G.B Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.+	Grade 6 Section 11.1 Grade 6 Section 11.3
7.6 Real-World Problems: Surface Area and Volume	7.G.B Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.+	Grade 6 Section 11.4
Chapter 8 Statistics and Probability		
8.1 Random Sampling Methods	Not identified as a Priority Standard. See teaching suggestions above.	
8.2 Making Inferences About Populations	7.SP.B Draw informal comparative inferences about two populations.+	

Course 2 Section	Priority Standards	Prior Learning
8.3 Defining Outcomes, Events, and Sample Space	Not identified as a Priority Standard. See teaching suggestions above.	
8.4 Finding Probability of Events	Not identified as a Priority Standard. See teaching suggestions above.	
8.5 Approximating Probability and Relative Frequency	Not identified as a Priority Standard. See teaching suggestions above.	
8.6 <i>Developing Probability Models</i>	7.SP.C Investigate chance processes and develop, use, and evaluate probability models.+	Grade 6 Section 6.2 Grade 6 Section 12.3 Grade 6 Section 13.2
Chapter 9 Probability of Compound Events		
9.1 <i>Compound Events</i>	7.SP.C Investigate chance processes and develop, use, and evaluate probability models.+	
9.2 Probability of Compound Events	Not identified as a Priority Standard. See teaching suggestions above.	
9.3 Independent Events	Not identified as a Priority Standard. See teaching suggestions above.	
9.4 Dependent Events	Not identified as a Priority Standard. See teaching suggestions above.	

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Course 3 Section	Priority Standards	Prior Learning
Chapter 1 The Real Number System		
1.1 Introducing Irrational Numbers	Not identified as a Priority Standard. See teaching suggestions above.	
1.2 <i>Introducing the Real Number System</i>	<i>8.NS.A Know that there are numbers that are not rational, and approximate them by rational numbers.+</i>	<i>Grade 7 Section 1.1 Grade 7 Section 1.2 Grade 7 Section 1.7</i>
1.3 Introducing Significant Digits	Not identified as a Priority Standard. See teaching suggestions above.	
Chapter 2 Exponents		
2.1 Exponential Notation	8.EE.A Work with radicals and integer exponents.*	
2.2 The Product and Quotient of Powers	8.EE.A Work with radicals and integer exponents.	
2.3 The Power of a Power	8.EE.A Work with radicals and integer exponents.	
2.4 The Power of a Product and the Power of a Quotient	8.EE.A Work with radicals and integer exponents.	
2.5 Zero and Negative Exponents	8.EE.A Work with radicals and integer exponents.	
2.6 <i>Squares, Square Roots, Cubes, and Cube Roots</i>	<i>8.EE.A Work with radicals and integer exponents.**</i>	
Chapter 3 Scientific Notation		
3.1 Understanding Scientific Notation	Not identified as a Priority Standard. See teaching suggestions above.	
3.2 <i>Adding and Subtracting in Scientific Notation</i>	<i>8.EE.A Work with radicals and integer exponents.+</i>	
3.3 Multiplying and Dividing in Scientific Notation	Not identified as a Priority Standard. See teaching suggestions above.	
Chapter 4 Linear Equations and Inequalities		
4.1 <i>Solving Linear Equations with One Variable</i>	<i>8.EE.C Analyze and solve linear equations and pairs of simultaneous linear equations.</i>	<i>Grade 7 Section 3.1 Grade 7 Section 3.2</i>
4.2 Identifying the Number Solutions to a Linear Equation	8.EE.C Analyze and solve linear equations and pairs of simultaneous linear equations.	Grade 7 Section 3.1 Grade 7 Section 3.2
4.3 <i>Understanding Linear Equations with Two Variables</i>	<i>8.EE.C Analyze and solve linear equations and pairs of simultaneous linear equations.</i>	<i>Grade 7 Section 3.1 Grade 7 Section 3.2</i>

Course 3 Section	Priority Standards	Prior Learning
4.4 Solving for a Variable in a Two-Variable Linear Equation	8.EE.C Analyze and solve linear equations and pairs of simultaneous linear equations.	Grade 7 Section 3.1 Grade 7 Section 3.2
4.5 Solving Linear Inequalities with One Variable	Not identified as a Priority Standard. See teaching suggestions above.	
Chapter 5 Lines and Linear Equations		
5.1 Finding and Interpreting Slopes of Lines	8.EE.B Understand the connections between proportional relationships, lines, and linear equations.	
5.2 Understanding Slope-Intercept Form	8.EE.B Understand the connections between proportional relationships, lines, and linear equations.	
5.3 Writing Linear Equations	8.EE.B Understand the connections between proportional relationships, lines, and linear equations.	
5.4 Sketching Graphs of Linear Equations	8.EE.B Understand the connections between proportional relationships, lines, and linear equations.	
5.5 Real-World Problems: Linear Equations	8.EE.B Understand the connections between proportional relationships, lines, and linear equations.	Grade 7 Section 3.3
Chapter 6 Systems of Linear Equations		
6.1 Introduction to Systems of Linear Equations	8.EE.C Analyze and solve linear equations and pairs of simultaneous linear equations.	
6.2 Solving Systems of Linear Equations Using Algebraic Methods	8.EE.C Analyze and solve linear equations and pairs of simultaneous linear equations.	
6.3 Real-World Problems: Systems of Linear Equations	8.EE.C Analyze and solve linear equations and pairs of simultaneous linear equations.	
6.4 Solving Systems of Linear Equations by Graphing	8.EE.C Analyze and solve linear equations and pairs of simultaneous linear equations.	
9.5 Inconsistent and Dependent Systems of Linear Equations	8.EE.C Analyze and solve linear equations and pairs of simultaneous linear equations.	
Chapter 7 Functions		
7.1 Understanding Relation and Functions	8.F.A Define, evaluate, and compare functions.	Grade 7 Section 2.1 Grade 7 Section 2.2 Grade 7 Section 2.3 Grade 7 Section 2.4 Grade 7 Section 2.5

Course 3 Section	Priority Standards	Prior Learning
7.2 Representing Functions	8.F.A Define, evaluate, and compare functions.	Grade 7 Section 2.6
7.3 Understanding Linear and Nonlinear Functions	8.F.A Define, evaluate, and compare functions. 8.F.B Use functions to model relationships between quantities.	Grade 7 Section 2.6 Grade 7 Section 3.1 Grade 7 Section 3.2
7.4 Compare Two Functions	8.F.A Define, evaluate, and compare functions.	
Chapter 8 The Pythagorean Theorem		
8.1 Understanding the Pythagorean Theorem and Plane Figures	8.G.B. Understand and apply the Pythagorean Theorem.	Grade 7 Section 6.1 Grade 7 Section 6.2
8.2 Understanding the Distance Formula	8.G.B Understand and apply the Pythagorean Theorem.	Grade 7 Section 6.3
8.3 Understanding the Pythagorean Theorem and Solids	8.G.B Understand and apply the Pythagorean Theorem.	Grade 7 Section 7.5
Chapter 9 Geometric Transformations		
9.1 Translations	Not identified as a Priority Standard. See teaching suggestions above.	
9.2 Reflections	Not identified as a Priority Standard. See teaching suggestions above.	
9.3 Rotations	Not identified as a Priority Standard. See teaching suggestions above.	
9.4 Dilations	Not identified as a Priority Standard. See teaching suggestions above.	
9.5 Comparing Transformations	Not identified as a Priority Standard. See teaching suggestions above.	
Chapter 10 Congruence and Similarity		
10.1 Understanding and Applying Congruent Figures	Not identified as a Priority Standard. See teaching suggestions above.	
10.2 Understanding and Applying Similar Figures	8.G.A Understand congruence and similarity using physical models, transparencies, or geometry software.+	Grade 7 Section 5.1 Grade 7 Section 5.2 Grade 7 Section 5.3 Grade 7 Section 5.4
10.3 Relating Congruent and Similar Figures to Geometric Transformations	Not identified as a Priority Standard. See teaching suggestions above.	
Chapter 11 Volume and Surface Area		
11.1 Recognizing Cylinders, Cones, Spheres, and Pyramids	Not identified as a Priority Standard. See teaching suggestions above.	
11.2 Finding Volumes and Surface Areas of Cylinders	Not identified as a Priority Standard. See teaching suggestions above.	

Course 3 Section	Priority Standards	Prior Learning
11.3 Finding Volumes and Surface Areas of Pyramids and Cones	Not identified as a Priority Standard. See teaching suggestions above.	
11.4 Finding Volumes and Surface Areas of Spheres	Not identified as a Priority Standard. See teaching suggestions above.	
11.5 Real-World Problems: Composite Solids	Not identified as a Priority Standard. See teaching suggestions above.	
Chapter 12 Statistics		
12.1 Scatter Plots	<i>8.SP.A Investigate patterns of association in bivariate data.+</i>	<i>Grade 7 Section 8.5</i>
12.2 Modeling Linear Associations	Not identified as a Priority Standard. See teaching suggestions above.	
12.3 Two-Way Tables	Not identified as a Priority Standard. See teaching suggestions above.	

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Course 2 Acc. Section	Priority Standards	Prior Learning
Chapter 1 The Real Number System		
1.1 Representing Rational Numbers on a Number Line	7.NS.A Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.*	Grade 6 Section 2.1
1.2 Writing Rational Numbers as Decimals	7.NS.A Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	Grade 6 Section 6.2
1.3 Introducing Irrational Numbers	Not identified as a Priority Standard. See teaching suggestions above.	
<i>1.4 Introducing the Real Number System</i>	<i>8.NS.A Know that there are numbers that are not rational, and approximate them by rational numbers.+</i>	
1.5 Introducing Significant Digits	Not identified as a Priority Standard. See teaching suggestions above.	
1.6 Adding Integers	7.NS.A Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	Grade 6 Section 2.2 Grade 6 Section 2.3
1.7 Subtracting Integers	7.NS.A Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	Grade 6 Section 2.2 Grade 6 Section 2.3
1.8 Multiplying and Dividing Integers	7.NS.A Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	
<i>1.9 Order of Operations with Integers</i>	<i>7.NS.A Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.**</i> 7.EE.B Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	
<i>1.10 Operations with Fractions and Mixed Numbers</i>	<i>7.NS.A Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.</i> 7.EE.B Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	<i>Grade 6 Section 3.1</i> <i>Grade 6 Section 3.2</i>
1.11 Operations with Decimals	7.NS.A Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers. 7.EE.B Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	Grade 6 Section 3.3 Grade 6 Section 3.4 Grade 6 Section 3.5 Grade 6 Section 3.6
Chapter 2 Algebraic Expressions		

Course 2 Acc. Section	Priority Standards	Prior Learning
2.1 Adding Algebraic Terms	7.EE.A Use properties of operations to generate equivalent expressions.	Grade 6 Section 7.1 Grade 6 Section 7.2
2.2 Subtracting Algebraic Terms	7.EE.A Use properties of operations to generate equivalent expressions.	Grade 6 Section 7.1 Grade 6 Section 7.2
2.3 Simplifying Algebraic Expressions	7.EE.A Use properties of operations to generate equivalent expressions.	Grade 6 Section 7.3
2.4 Expanding Algebraic Expressions	7.EE.A Use properties of operations to generate equivalent expressions.	Grade 6 Section 7.4
2.5 Factoring Algebraic Expressions	7.EE.A Use properties of operations to generate equivalent expressions.	Grade 6 Section 7.4
2.6 Writing Algebraic Expressions	7.EE.A Use properties of operations to generate equivalent expressions.	Grade 6 Section 7.1 Grade 6 Section 7.2 Grade 6 Section 7.3 Grade 6 Section 7.4
2.7 Real-World Problems: Algebraic Reasoning	7.EE.B Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	Grade 6 Section 7.5
Chapter 3 Algebraic Equations and Inequalities		
3.1 Identifying Equivalent Equations	7.EE.A Use properties of operations to generate equivalent expressions	Grade 6 Section 8.1 Grade 6 Section 8.2 Grade 6 Section 8.3
3.2 Solving Algebraic Equations	7.EE.B Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	Grade 6 Section 8.1
3.3 Real-World Problems: Algebraic Equations	7.EE.B Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	Grade 6 Section 8.3
3.4 Solving Algebraic Inequalities	7.EE.B Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	Grade 6 Section 8.4
3.5 Real-World Problems: Algebraic Inequalities	7.EE.B Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	Grade 6 Section 8.4 Grade 6 Section 8.5
Chapter 4 Linear Equations and Inequalities		
4.1 Solving Linear Equations with One Variable	8.EE.C Analyze and solve linear equations and pairs of simultaneous linear equations.	
4.2 Identifying the Number Solutions to a Linear Equation	8.EE.C Analyze and solve linear equations and pairs of simultaneous linear equations.	
4.3 Understanding Linear Equations with Two Variables	8.EE.C Analyze and solve linear equations and pairs of simultaneous linear equations.	

Course 2 Acc. Section	Priority Standards	Prior Learning
4.4 Solving for a Variable in a Two-Variable Linear Equation	8.EE.C Analyze and solve linear equations and pairs of simultaneous linear equations.	
4.5 Solving Linear Inequalities with One Variable	Not identified as a Priority Standard. See teaching suggestions above.	
Chapter 5 Lines and Linear Equations		
5.1 Finding and Interpreting Slopes of Lines	8.EE.B Understand the connections between proportional relationships, lines, and linear equations.	
5.2 Understanding Slope-Intercept Form	8.EE.B Understand the connections between proportional relationships, lines, and linear equations.	
5.3 Writing Linear Equations	8.EE.B Understand the connections between proportional relationships, lines, and linear equations.	
5.4 Sketching Graphs of Linear Equations	8.EE.B Understand the connections between proportional relationships, lines, and linear equations.	
5.5 Real-World Problems: Linear Equations	8.EE.B Understand the connections between proportional relationships, lines, and linear equations.	
Chapter 6 Functions		
6.1 Understanding Relation and Functions	8.F.A Define, evaluate, and compare functions.	
6.2 Representing Functions	8.F.A Define, evaluate, and compare functions.	
6.3 Understanding Linear and Nonlinear Functions	8.F.A Define, evaluate, and compare functions. 8.F.B Use functions to model relationships between quantities.	
6.4 Comparing Two Functions	8.F.A Define, evaluate, and compare functions.	
Chapter 7 Exponents		
7.1 Exponential Notation	8.EE.A Work with radicals and integer exponents.	
7.2 The Product and Quotient of Powers	8.EE.A Work with radicals and integer exponents.	
7.3 The Power of a Power	8.EE.A Work with radicals and integer exponents.	
7.4 The Power of a Product and the Power of a Quotient	8.EE.A Work with radicals and integer exponents.	
7.5 Zero and Negative Exponents	8.EE.A Work with radicals and integer exponents.	
7.6 Squares, Square Roots, Cubes, and Cube Roots	8.EE.A Work with radicals and integer exponents.	
Chapter 8 Scientific Notation		

Course 2 Acc. Section	Priority Standards	Prior Learning
8.1 Understanding Scientific Notation	Not identified as a Priority Standard. See teaching suggestions above.	
8.2 Adding and Subtracting in Scientific Notation	<i>8.EE.A Work with radicals and integer exponents.+</i>	
8.3 Multiplying and Dividing in Scientific Notation	Not identified as a Priority Standard. See teaching suggestions above.	
Chapter 9 Proportion and Percent of Change		
9.1 Identifying Direct Proportion	<i>7.RP.A Analyze proportional relationships and use them to solve real-world and mathematical problems.</i>	Grade 6 Section 4.1 Grade 6 Section 4.2
9.2 Representing Direct Proportion Graphically	7.RP.A Analyze proportional relationships and use them to solve real-world and mathematical problems.	Grade 6 Section 4.2 Grade 6 Section 9.1
9.3 Real-World Problems: Direct Proportion	7.RP.A Analyze proportional relationships and use them to solve real-world and mathematical problems.	Grade 6 Section 4.3
9.4 Identifying Inverse Proportion	7.RP.A Analyze proportional relationships and use them to solve real-world and mathematical problems.	Grade 6 Section 4.1 Grade 6 Section 4.2
9.5 Percent Increase and Decrease	<i>7.RP.A Analyze proportional relationships and use them to solve real-world and mathematical problems.</i>	Grade 6 Section 6.1 Grade 6 Section 6.2 Grade 6 Section 6.3
9.6 Real-World Problems: Percent Increase and Decrease	<i>7.RP.A Analyze proportional relationships and use them to solve real-world and mathematical problems.</i>	Grade 6 Section 6.1 Grade 6 Section 6.2 Grade 6 Section 6.3 Grade 6 Section 6.4
Chapter 10 Angle Properties and Straight Lines		
10.1 Complementary, Supplementary, and Adjacent Angles	Not identified as a Priority Standard. See teaching suggestions above.	
10.2 Angles That Share a Vertex	Not identified as a Priority Standard. See teaching suggestions above.	
10.3 Alternate Interior, Alternate Exterior, and Corresponding Angles	Not identified as a Priority Standard. See teaching suggestions above.	
10.4 Interior and Exterior Angles	Not identified as a Priority Standard. See teaching suggestions above.	
Chapter 11 Geometric Construction		
11.1 Constructing Triangles	Not identified as a Priority Standard. See teaching suggestions above.	

Course 2 Acc. Section	Priority Standards	Prior Learning
11.2 Scale Drawings and Lengths	7.G.A Draw, construct and describe geometrical figures and describe the relationships between them.+	Grade 6 Section 4.2 Grade 6 Section 5.2
11.3 Scale Drawing and Areas	7.G.A Draw, construct and describe geometrical figures and describe the relationships between them.+	Grade 6 Section 4.3 Grade 6 Section 5.2
Chapter 12 Area, Volume, and Surface Area		
12.1 Radius, Diameter, and Circumference of a Circle	Not identified as a Priority Standard. See teaching suggestions above.	
12.2 Area of a Circle	Not identified as a Priority Standard. See teaching suggestions above.	
12.3 Real-World Problems: Circles	Not identified as a Priority Standard. See teaching suggestions above.	
12.4 Area of Composite Figures	7.G.B Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.+	Grade 6 Section 10.1 Grade 6 Section 10.2 Grade 6 Section 10.3
12.5 Finding Volumes and Surface Areas of Prisms	7.G.B Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.+	Grade 6 Section 11.1 Grade 6 Section 11.3 Grade 6 Section 11.4
12.6 Recognizing Cylinders, Cones, Spheres, and Pyramids	Not identified as a Priority Standard. See teaching suggestions above.	
12.7 Finding Volumes and Surface Areas of Cylinders	Not identified as a Priority Standard. See teaching suggestions above.	
12.8 Finding Volumes and Surface Areas of Pyramids and Cones	Not identified as a Priority Standard. See teaching suggestions above.	
12.9 Finding Volumes and Surface Areas of Spheres	Not identified as a Priority Standard. See teaching suggestions above.	
12.10 Real-World Problems: Composite Solids	Not identified as a Priority Standard. See teaching suggestions above.	
Chapter 13 Geometric Transformations		
13.1 Translations	Not identified as a Priority Standard. See teaching suggestions above.	
13.2 Reflections	Not identified as a Priority Standard. See teaching suggestions above.	
13.3 Rotations	Not identified as a Priority Standard. See teaching suggestions above.	
13.4 Dilations	Not identified as a Priority Standard. See teaching suggestions above.	
13.5 Comparing Transformations	Not identified as a Priority Standard. See teaching suggestions above.	
Chapter 14 Congruence and Similarity		

Course 2 Acc. Section	Priority Standards	Prior Learning
14.1 Understanding and Applying Congruent Figures	Not identified as a Priority Standard. See teaching suggestions above.	
14.2 Understanding and Applying Similar Figures	<i>8.G.A Understand congruence and similarity using physical models, transparencies, or geometry software.+</i>	
14.3 Relating Congruent and Similar Figures to Geometric Transformations	Not identified as a Priority Standard. See teaching suggestions above.	
Chapter 15 Statistics and Probability		
15.1 Random Sampling Methods	Not identified as a Priority Standard. See teaching suggestions above.	
15.2 Making Inferences About Populations	<i>7.SP.B Draw informal comparative inferences about two populations.+</i>	
15.3 Defining Outcomes, Events, and Sample Space	Not identified as a Priority Standard. See teaching suggestions above.	
15.4 Finding Probability of Events	Not identified as a Priority Standard. See teaching suggestions above.	
15.5 Approximating Probability and Relative Frequency	Not identified as a Priority Standard. See teaching suggestions above.	
15.6 Developing Probability Models	<i>7.SP.C Investigate chance processes and develop, use, and evaluate probability models.+</i>	Grade 6 Section 6.2 Grade 6 Section 12.3 Grade 6 Section 13.2
Chapter 16 Probability of Compound Events		
16.1 Compound Events	<i>7.SP.C Investigate chance processes and develop, use, and evaluate probability models.+</i>	
16.2 Probability of Compound Events	Not identified as a Priority Standard. See teaching suggestions above.	
16.3 Independent Events	Not identified as a Priority Standard. See teaching suggestions above.	
16.4 Dependent Events	Not identified as a Priority Standard. See teaching suggestions above.	

* Priority standards clusters were identified as Priority Instructional Content through Achieve the Core by Student Achievement Partners, Pre-Publication Draft, May 2020. Full documents are available at AchieveTheCore.org.

**International Center for Leadership in Education (ICLE) selected further priority standards, in most cases within the clusters called out by Achieve the Core.

+ Indicates standard selected by ICLE that is not within an Achieve the Core cluster.